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EXAMINER	
WILLIS, RANDAL L	
ART UNIT	**PAPER NUMBER**
2629	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/677,970	COLEY ET AL.	
	Examiner	Art Unit	
	Randal L. Willis	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 May 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5 and 7-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5 and 7-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to arguments in application No 10/677970 filed 5/16/2007. Claims 1-5, 7-32 are pending and have been examined.

Response to Arguments

2. Applicant's arguments with respect to claims 1-5, 7-32 have been considered but are moot in view of the new ground(s) of rejection.

Information Disclosure Statement

3. The information disclosure statement (IDS) submitted on 3/26/2004 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Objections

4. Claim 32 is objected to because of the following informalities: Refers back to the machine-readable storage of claim 23, when no machine-readable storage is mentioned in claim 23. For examination purposes claim will be read to depend upon claim 25. Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1-5, 7-9, 11, 13-20,22-30 and 32 are rejected under 35 U.S.C. 103(a) over by Tanada 2002/0047550 in view of Kikinis (US 5,331,434)

Apropos claim 1, Tanada teaches:

A self-calibrating imaging display system comprising:

a display having a screen (light emitting device shown in Fig 1).

at least one photosensor (photoelectric conversion elements 106, Fig 1), said photosensor detecting luminance value correlating to a luminance level of said screen ([0107] lines 10-13).

However Tanada fails to explicitly teach:

The photosensor being formed on a transparent sheet removeably affixed to said screen.

In the same field of photosenor useage in display systems, Kikinis teaches a transparent photovoltaic film (Abstract line 4) that can be removeably applicable to a display screen (Col 2 lines 36-38) that is capable of detecting the luminance of individual pixels(Col 4 lines 29-31, Fig 4).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use a transparent photosensitive sheet as taught by Kikinis to detect the luminance of pixels as taught by Tanada in order to provide a luminance detector that can be used with existing displays (Abstract lines 17-20).

Apropos claim 2, Kikinis teaches:

The self calibrating imaging display system of claim 1, wherein said at least one photo sensor comprises an array of photosensors (Photosensor region for each pixel illuminated, Fig. 2, Col 3 lines 29-34).

Apropos claim 3, Tanada and Kikinis teach:

The self calibrating imaging display system of claim 2, wherein said array of photosensors comprises photosensors horizontally and vertically dispersed over a portion of said transparent sheet(See Fig 1, pixels shown in array layout both horizontally and vertically in Tanada, which would line up with photosensor regions 22, and 26 in Kikinis).

Apropos claim 4, Kilkinis teaches:

The self calibrating imaging display system of claim 3, wherein said portion is a region of said screen comprising at least 90% of a surface area of said transparent sheet (Sheet 33, Fig. 3 covers entire area of display screen and detects each pixel).

Apropos claim 5, Kikinis teaches:

The self calibrating imaging display system of claim 1, wherein said at least one photosensor is formed into said transparent sheet (Col 3 lines 6-8).

Apropos claim 7, Tanada teaches:

The self calibrating imaging display system of claim 1, further comprising a calibration module (Brightness correction device, [0103] lines 3-6), said calibration module receiving an input from said photosensors correlating to

said luminance value and determining at least one luminance correction factor ([0106] lines 6-8) which is applied to adjust luminance of said screen.

Apropos claim 8, Tanada teaches:

The self calibrating imaging display system of claim 7, wherein a plurality of luminance correction factors are determined, different ones of said luminance correction factors being applied to different regions of said screen ([0107] lines 18-23).

Apropos claim 9, Tanada teaches:

The self calibrating imaging display system of claim 7, wherein said calibration module automatically updates said luminance correction factor at predetermined intervals ([0108] lines 4-7 and [0109]).

Apropos claim 11, Tanada teaches:

The self calibrating imaging display system of claim 7, said calibration module generating a calibration record upon an update of said luminance correction factor (correction data stored in data storage prtion 102, non-volatile memory [0108] lines 1-3).

Apropos claim 13, Tanada teaches:

A self calibrating imaging display system comprising:

a display having a screen (device shown in Fig 1);

at least one photosensor (106 Fig 1), said photosensor detecting color values correlating to a color level of said screen ([0018] lines 8-10).

However Tanada fails to explicitly teach:

The photosensor being formed on a transparent sheet removeably affixed to said screen.

In the same field of photosenor useage in display systems, Kikinis teaches a transparent photovoltaic film (Abstract line 4) that can be removeably applicable to a display screen (Col 2 lines 36-38) that is capable of detecting the color luminance of individual pixels(Col 4 lines 56-59).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use a transparent photosensitive sheet as taught by Kikinis to detect the luminance of pixels as taught by Tanada in order to provide a luminance detector that can be used with existing displays (Abstract lines 17-20).

Apropos claim 14, Tanada teaches:

The self calibrating imaging display system of claim 13, wherein said at least one photo sensor comprises an array of (Photosensor region for each pixel illuminated, Fig. 2, Col 3 lines 29-34).

Apropos claim 15, Tanada teaches:

A method of calibrating an imaging display system comprising the steps of:

receiving at least one luminance value from at least one photosensor affixed to a screen of a display ([0107] lines 10-13), said photosensor detecting luminance levels of said screen ([0118] 1-3);

and from said detected luminance levels, determining at least one luminance correction factor which is applied to adjust luminance of said screen ([0107] lines 18-23).

However Tanada fails to explicitly teach:

The photosensor being formed on a transparent sheet removeably affixed to said screen.

In the same field of photosenor useage in display systems, Kikinis teaches a transparent photovoltaic film (Abstract line 4) that can be removeably applicable to a display screen (Col 2 lines 36-38) that is capable of detecting the luminance of individual pixels(Col 4 lines 29-31, Fig 4). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use a transparent photosensitive sheet as taught by Kikinis to detect the luminance of pixels as taught by Tanada in order to provide a luminance detector that can be used with existing displays (Abstract lines 17-20).

Apropos claim 16, Tanada teaches:

The method of calibrating an imaging display system according to claim 15, wherein said at least one photo sensor comprises an array of photosensors (Photosensor region for each pixel illuminated, Fig. 2, Col 3 lines 29-34).

Apropos claim 17, Tanada teaches:

The method of calibrating an imaging display system according to claim 16, wherein said array of photosensors comprises photosensors horizontally and vertically dispersed over a portion of said transparent sheet (See Fig 1, pixels shown in array layout both horizontally and vertically in Tanada, which would line up with photosensor regions 22, and 26 in Kikinis).

Apropos claim 18, Tanada teaches:

The method of calibrating an imaging display system according to claim 17, wherein said portion is a region of said screen comprising at least 90% of a surface area of said screen(Sheet 33, Fig. 3 covers entire area of display screen and detects each pixel).

Apropos claim 19, Tanada teaches:

The method of calibrating an imaging display system according to claim 17, wherein a plurality of luminance correction factors are determined (correction computed in each pixel [0107] lines 20-22), different ones of said luminance correction factors being applied to different regions of said transparent sheet(correction performed for each pixel, each pixel is a different region of screen [0106] lines 6-8).

Apropos claim 20, Tanada teaches:

The method of calibrating an imaging display system according to claim 15, further comprising the step of automatically updating said luminance correction factor at predetermined intervals ([0108] lines 4-7 and [0109]).

Apropos claim 22, Tanada teaches:

The method of calibrating an imaging display system according to claim 15, further comprising the step of generating a calibration record upon an update of said luminance correction factor (correction data stored in data storage portion 102, non-volatile memory [0108] lines 1-3).

Apropos claim 23, Tanada teaches:

A method of calibrating an imaging display system comprising the steps of:

receiving at least one color value ([0018] lines 8-10) from at least one photosensor integrated with a screen of a display([0107] lines 10-13), said photosensor detecting color levels of said screen([0018] lines 8-10);

and from said detected color levels, determining at least one color correction factor which is applied to adjust color levels of said screen([0107] lines 18-23).

However Tanada fails to explicitly teach:

The photosensor being formed on a transparent sheet removeably affixed to said screen.

In the same field of photosenor useage in display systems, Kikinis teaches a transparent photovoltaic film (Abstract line 4) that can be removeably applicable to a display screen (Col 2 lines 36-38) that is capable of detecting the color luminance of individual pixels(Col 4 lines 56-59).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use a transparent photosensitive sheet as taught by Kikinis to detect the luminance of pixels as taught by Tanada in order to provide a luminance detector that can be used with existing displays (Abstract lines 17-20).

Apropos claim 24, Tanada teaches:

The method of calibrating an imaging display system according to claim 23, wherein said at least one photo sensor comprises an array of photosensors (Photosensor region for each pixel illuminated, Fig. 2, Col 3 lines 29-34).

Apropos claim 25, Tanada teaches:

A machine-readable storage (non-volatie memory 100, Fig 1)having stored thereon a computer program having a plurality of code sections, the code sections executable by a machine for causing the machine to perform the steps of (100 stores the correction values and the test pattern, [0108] lines 1-6):

receiving at least one luminance value from at least one photosensor integrated with a screen of a display ([0107] lines 10-13), said photosensor detecting luminance levels of said screen ([0118] 1-3);

and from said detected luminance levels, determining at least one luminance correction factor which is applied to adjust luminance of said screen ([0120] lines 1-5).

However Tanada fails to explicitly teach:

The photosensor being formed on a transparent sheet removeably affixed to said screen.

In the same field of photosenor useage in display systems, Kikinis teaches a transparent photovoltaic film (Abstract line 4) that can be

removeably applicable to a display screen (Col 2 lines 36-38) that is capable of detecting the color luminance of individual pixels(Col 4 lines 56-59).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use a transparent photosensitive sheet as taught by Kikinis to detect the luminance of pixels as taught by Tanada in order to provide a luminance detector that can be used with existing displays (Abstract lines 17-20).

Apropos claim 26, Tanada teaches:

The machine-readable storage of claim 25, wherein said at least one photo sensor comprises an array of photosensors (Photosensor region for each pixel illuminated, Fig. 2, Col 3 lines 29-34).

Apropos claim 27, Tanada teaches:

The machine-readable storage of claim 26, wherein said array of photosensors comprises photosensors horizontally and vertically dispersed over a portion of said transparent sheet (See Fig 1, pixels shown in array layout both horizontally and vertically in Tanada, which would line up with photosensor regions 22, and 26 in Kikinis).

Apropos claim 28, Tanada teaches:

The machine-readable storage of claim 27, wherein said portion is a region of said screen comprising at least 90% of a surface area of said transparent sheet (Sheet 33, Fig. 3 covers entire area of display screen and detects each pixel).

Apropos claim 29, Tanada teaches:

The machine-readable storage of claim 27, wherein a plurality of luminance correction factors are determined (correction computed in each pixel [0107] lines 20-22), different ones of said luminance correction factors being applied to different regions of said transparent sheet (correction performed for each pixel, each pixel is a different region of screen [0106] lines 6-8).

Apropos claim 30, Tanada teaches:

The machine-readable storage of claim 25, further comprising the step of automatically updating said luminance correction factor at predetermined intervals ([0108] lines 4-7 and [0109]).

Apropos claim 32, Tanada teaches:

The machine-readable storage of claim 25, further comprising the step of generating a calibration record upon an update of said luminance correction

factor (correction data stored in data storage portion 102, non-volatile memory [0108] lines 1-3).

8. Claims 10, 21 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanada (2002/0047550) and Kininis (5,331,434) as applied to claim 8 above in view of Ramamurthy (6,121,949).

Apropos claims 10, 21, and 31 Tanada and Kikinis teach all of the limitations of the preceding claims, however fail to explicitly teach updating said luminance correction factor responsive to a user input.

In the same field of preserving image quality in display systems, Ramamurthy teaches allowing a user to select screen parameters to be update to improve the quality of the display.

Therefor it would have been obvious to one of ordinary skill in the art at the time of the invention to allow the user to control quality of the display though application software as taught by Ramamurthy in the display of Tanada in order to insure that the quality of the display is maintained.

9. Claim 12 rejected under 35 U.S.C. 103(a) as being unpatentable over Tanada (2002/0047550) and Kikinis as applied to claim 1 above in view of Cok (6,836,260).

Apropos claim 12, Tanada and Kikinis teach the self calibrating display, however fails to explicitly teach utilizing the display in a medical imaging display.

In the same field of detecting luminance and degradation in display system, Cok teaches the use of such displays is critical in the medical fields.

Therefor it would have been obvious to one of ordinary skill in the art at the time of the invention to use the self calibrating display of Tanada in a medical image display as shown by Cok in order to provide a reliable display for such critical data to be displayed.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a

first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Randal L. Willis whose telephone number is (571) 270-1461. The examiner can normally be reached on Monday to Friday from 7:30am to 5:00pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RLW

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SUPERVISORY PATENT EXAMINER